**Objective:**

The objective of the lab was to build a database server using Amazon Relational Database Service (RDS) and connect to it from an Amazon EC2 instance. Through this lab, I gained some knowledge how to create a security group, DB subnet group and add these group to the database instance. I also learned how to configure its security settings and connect to it using the MySQL command-line client.

**Procedure:**

The first step was to create a security group by selecting appropriate VPC and adding inbound rule to permit inbound traffic on port 3306 from any EC2 instance.

The next step was to create a DB subnet group from the subnet groups available in RDS services. Then the subnet group is created with two availability zones us-east-1a and us-east-1b with 10.0.1.0/24 and 10.0.3.0/24 CDIR ranges.

Finally, the relations database instance was created by selecting MySQL as engine, Dev/test as templates, Multi AZ DB instance, Burstable classes, general purpose SSD as storage type, lab VPC, DB security groups and so on. After that the connection to the database instance is made by accessing server via <http://44.203.235.73/rds.php> by using endpoint, DB name, username, and password.

Following are the screenshot of the process:

A screenshot of a computer

Description automatically generated with medium confidence

Fig 1: Security Group

2.1. A screenshot of a computer

Description automatically generated with low confidence

Fig 2.1. Subnet Group Creation window

A screenshot of a computer

Description automatically generated with medium confidence

Fig 2.2. Subnet Group

A screenshot of a computer

Description automatically generated

Fig 3.1. Relation Database instance creation window 1

A screenshot of a computer

Description automatically generated with medium confidence

Fig 3.2. Relation Database instance creation window 2

A screenshot of a computer

Description automatically generated with medium confidence

Fig 3.3 Relation Database instance creation window 3

A screenshot of a computer

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Fig 3.4. Relation Database instance creation window 4

A screenshot of a computer

Description automatically generated

Fig 3.5. Relation Database instance creation window 5

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Fig 3.6. Relation Database instance creation window 6

A screenshot of a computer

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Description automatically generated

Fig 3.7. Relation Database instance creation window 7

A screenshot of a computer

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Fig 3.8. Relation Database instance creation window 8

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Fig 4. Connecting and accessing relational database instance

**Developing Knowledge:**

The part of the activity that helped me develop knowledge of the subject was configuring the security setting for the RDS instance. This involved creating security groups and setting inbound rules to allow traffic from EC2 instance to the RDS instance, which is an important aspect of managing and securing a database.

**Difficulties and Incompleteness:**

I felt difficulty while accessing the relational database instance. It doesn’t give any information about the wrong setup during the relational database instance creation and always prompts to the same login page. However, I have to delete the instance created and carefully setup the configuration while creation of the instance.